THE MODEL 3860 IPG SYSTEM

The Model 3860 IPG System is a programmable implantable neurostimulation system designed to deliver low-intensity, electrical impulses to nerve structures. The system consists of a hand-held battery powered Programmer which communicates to a self-powered implantable pulse generator (IPG). The IPG delivers electrical impulses through an implanted lead(s) to the selected nerve fibers in order to provide therapeutic stimulation. The Programmer enables the patient to adjust current stimulation amplitude.

The Programmer and IPG communicate by modulating an 87.5Khz signal for data sent to the IPG and modulating a 40Khz signal for data sent back to the Programmer. The data is modulated using a standard 2400 Baud RS232 protocol. All of the RF circuitry is included inside the housing of the Programmer which must be placed within approximately 1.5 inches of the implanted IPG to communicate with it.

For the transmitter section of the Programmer circuitry, timer circuitry generates a signal which is approximately 87.5Khz that drives the carrier signal through an airwound inducter that acts as an antenna. The carrier is switched on and off by a signal that meets RS232 2400 baud timing requirements.

For the receiver section of the Programmer circuitry, when the Programmer is in receive mode, the airwound inductor becomes part of a 40Khz LC resonant tank circuit and the received carrier is sent through a 40Khz bandpass circuit where it is then lowpass filtered to recover a 2400 baud logic level signal.